

Bill Shaffer

- Confidential -

MINUTES OF MEETING ON

Attending: Mark Arnold, Pat Collings, Mike Whaley, John McGeorge, Brad Hunemuller, Dave Kelley

N-12 Joints

Bill Shaffer shared his concepts for improvements to our IB coupler. One concept is to modify the bell with a gasket that fits inside the bell – replacing the gasket in the mini corrugation. The objective is to improve joint performance and even hit 10.8 psi and a field-testable joint at 3.5 psi. This design will protect the gasket during installation since it will be shielded by the bell. It also emulates a highly-accepted plastic pipe design: SDR 35 joints. This gasket-in-bell feature may enhance specifiers' comfort level with our pipe.

The gasket Bill is working with is a thermo plastic elastomer which meets ASTM F-477. The rubber gasket is bonded to a strip of polyethylene which improves the seal between the spigot and gasket.

Another alternative Bill is considering is wrapping the IB joint with a steel band to provide a WT joint.

Hancor IB

The new design bell is tapered and has a rolled end on the lip of the bell. The bell does not appear to have improved ring stiffness except for the edge of the lip. Our initial conclusions are:

- This solves bell curvature problems we see; some bells become distorted as they cool.
- This enhances the bell's ability to resist deformation when it is pushed with a bar in the trench as pipes are pushed "home."
- Contractors may feel more comfortable with it because it fits snugly over full size corrugations without using a gasket.
- This solves problems with rolling gaskets.

Blair believes that this joint will have little competitive advantage over N-12 IB. He said that its appeal will be in the commercial applications that do not require a gasket. He also indicated that Hancor's foam gasket is accepted in all areas where F-477 gaskets are not specified.

Bill Shaffer does not believe that this joint enhances leakage performance.

Action Items:

* John McGeorge will send 12" and 15" samples to New Miami.

⊙ Need To Purch.

Bill Shaffer will test the joints for leakage performance. Bill will also measure bell thickness and stiffness.